NORTH TOPSAIL BEACH

Input To CRC

Ocean Inlet Management

April 2, 2014

Agenda

- Erosion Rates Adjacent to Inlets
- Planning for Resilient Shorelines & Sea Level Rise
- RIVET
- Advocating for Wise Public Policy

Erosion Rates

- Required for Development Standards in Inlet Areas
- Recommendation: Use actual Physical Monitoring Data required for permitted inlet/shoreline projects

North Topsail Beach
Ocean Inlet/Shoreline Management

Phase One – New River Inlet Channel Realignment Project completed January 2013

Channel dredged to: 17’ deep 500’ wide

Realigned toward NTB

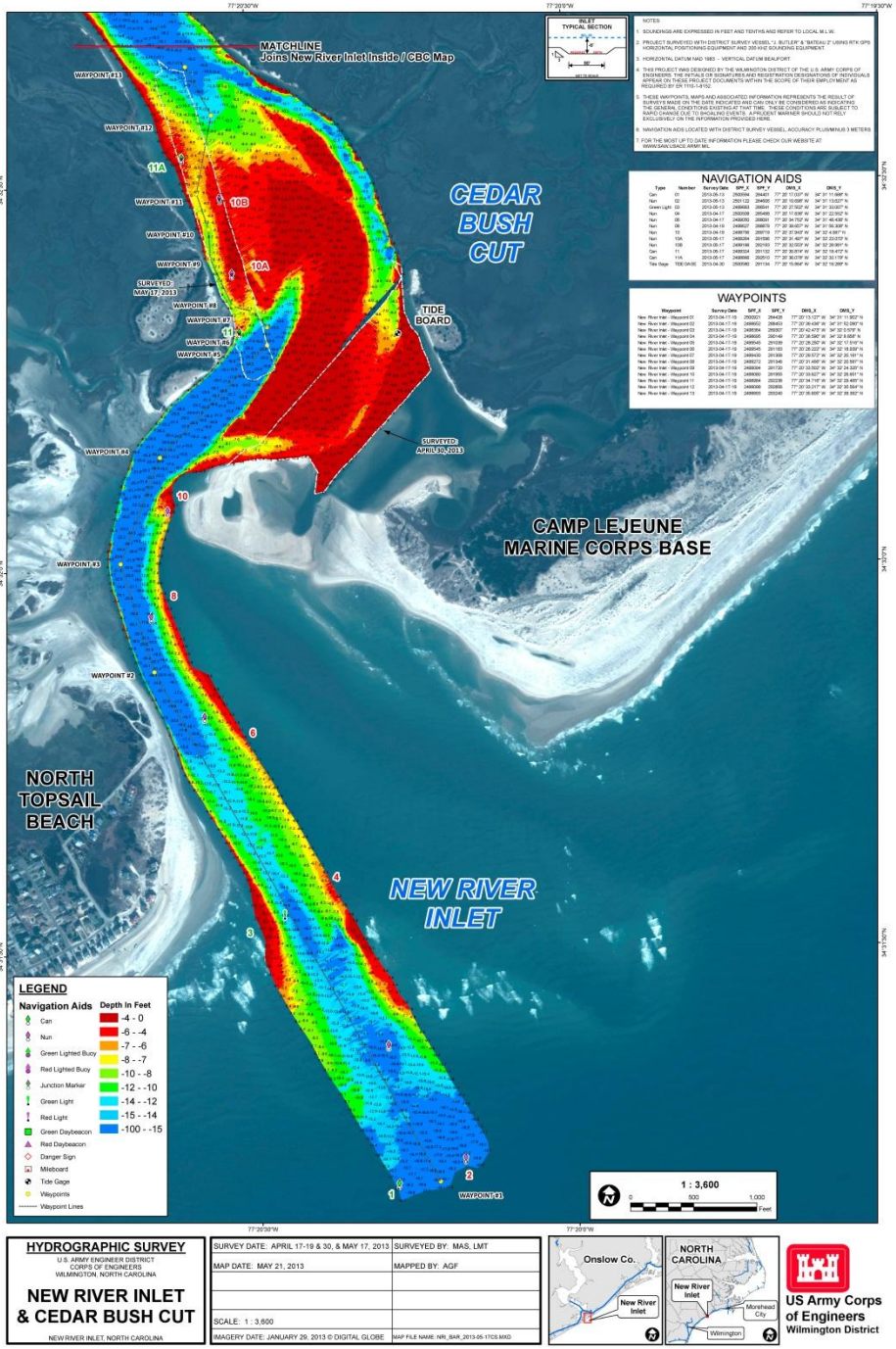
540,000 cubic yards of sand placed on 1.5 miles of shoreline

Project Maintenance: Scheduled every 4-5 years

Phase 5 Beach Restoration Scheduled for Fall 2014

1.5 M cubic yards placed on 3.85 miles of beach at south end of NTB

Permits & Financing in place

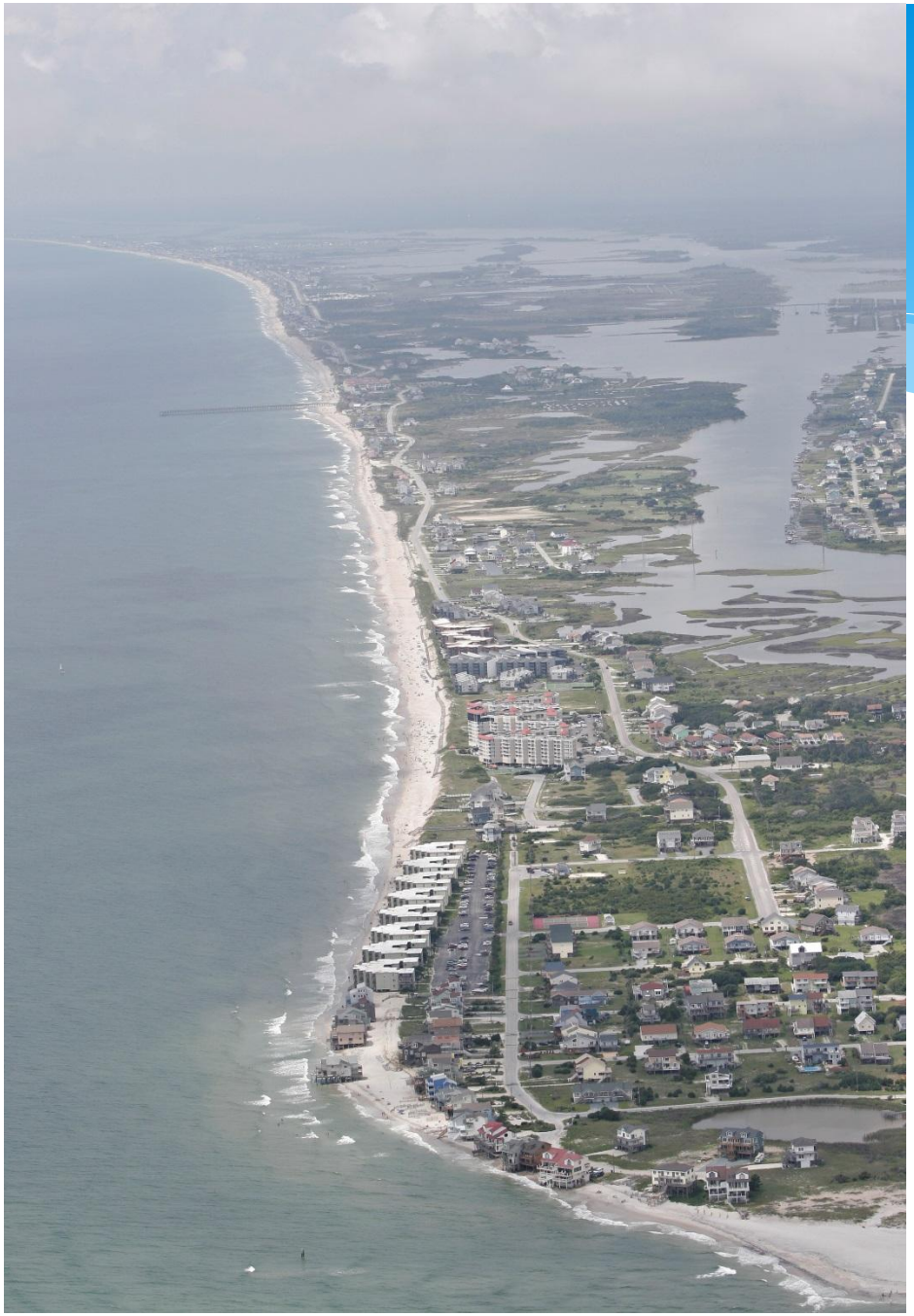


North Topsail Beach Ocean Inlet/Shoreline Management

US Army Corps of Engineers
Hydrographic Survey
of New River Inlet Channel
(Post Phase 1 Project)

Survey Date: April 17-19, 30
May 17, 2013

Map Date: May 21, 2013



Resilient Shorelines and Sea Level Rise

Photo Taken August 2007

Inlet Hazard Area of
North Topsail Beach, NC

Resilient Shorelines and Sea Level Rise

Before Phase 1 Construction

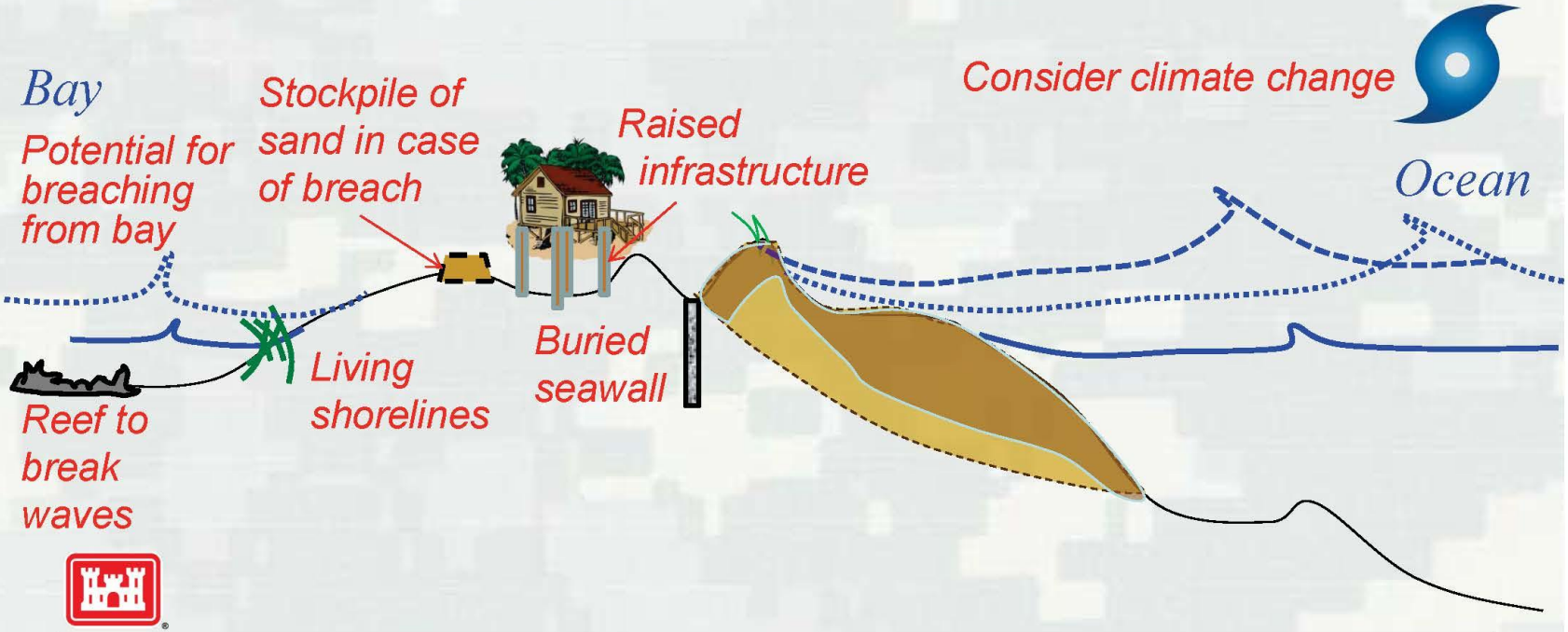
After Construction

Evolving Approaches: Example of Resilient Coastal Risk Reduction

Post-Sandy:

Design to consider losses due to all potential storms

Optimize benefit-to-cost AND system resilience



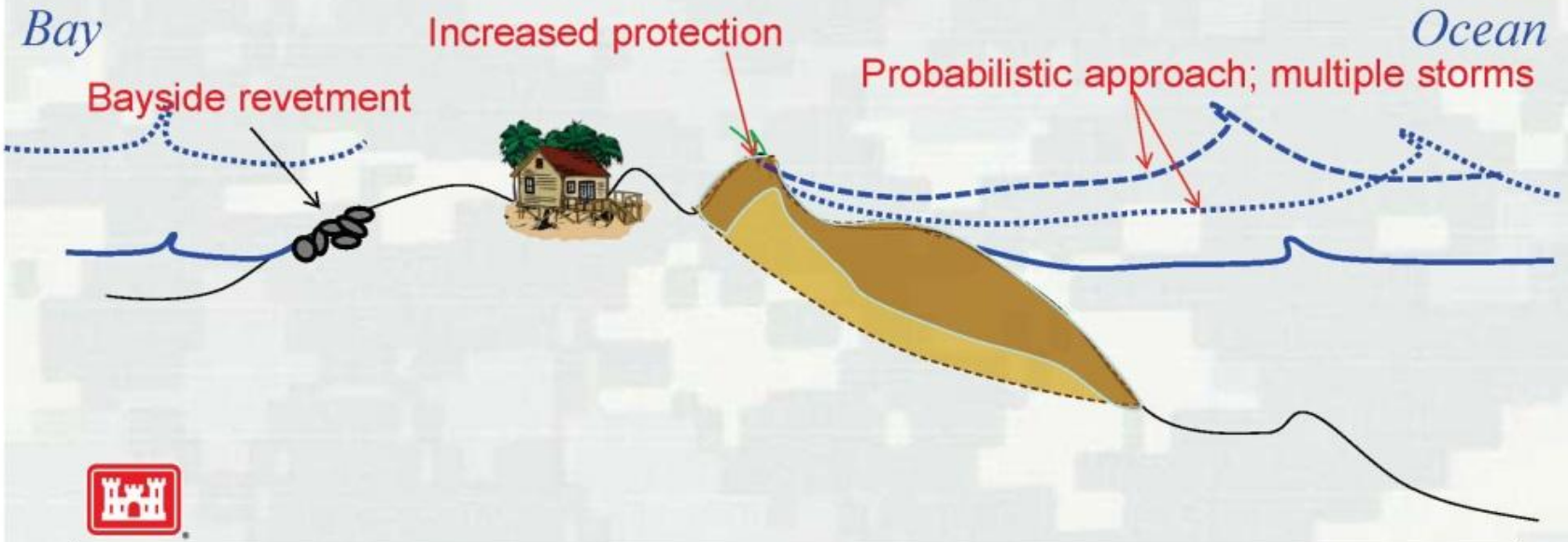
Resilient Shorelines and Sea Level Rise

Evolving Approaches to Risk Reduction

Post-Katrina, Pre-Sandy:

Design considering losses with all potential storms

Design to optimize benefit-to-cost (NED approach)



RIVET

- Office of Naval Research and Battelle conducted a month long study of New River Inlet at NTB during Spring 2012
- Purpose of the study was to measure inlet dynamics, the movement of sediments and to tie results with numerical predictive models
- Data collected over a one month period.

RIVET
(cont'd)

- Extensive bottom-mounted underwater instrumentation used to measure waves, currents, etc.
- Bathymetric surveys made to monitor change.
- Ground –based, airborne and satellite sensing.
- Unmanned underwater and surface vehicles.
- Scientific Data and Published Reports available.

Advocating for Wise Public Policy

- Restored beaches are an important recreational asset and economically attract visitors from all over the country and globe.
- Restored beaches save Federal, State and Local Governments money and avoid the stress and misery of the destruction of private property and public infrastructure.
- A State shoreline protection program is wise public policy and is needed in North Carolina.